CLAIMS

1. A swing compressor comprising:

a cylinder (6) which defines a cylinder chamber (8);

a piston (4) composed of a generally cylindrical-shaped roller (2) which orbitally revolves along an inner surface of the cylinder chamber (8) and a blade (3) which is formed integrally with the roller (2) and which is swingably held by the cylinder (6); and

a drive shaft (1) having an eccentric portion (5) which is slidably fitted to an inner circumferential sliding surface (14) of the roller (2), wherein

the piston (4) devides a space inside of the cylinder (6) into a suction chamber (12) and a compression chamber (13) and performs a swing motion by rotation of the drive shaft (1), and wherein

the inner circumferential sliding surface (14) of the roller (2) includes

a large-width portion (15) which receives a heavy load; and

a small-width portion (16) which is smaller in width than the large-width portion (15) and which receives a light load.

2. The swing compressor as claimed in Claim 1, wherein

assuming that a reference line (O) is given by an intersecting line between a plane (P) passing through a center of the blade (3) and parallel to the blade (3) and the inner circumferential sliding surface (14) of the roller (2), the small-width portion (16) is formed over a range from a line (A) obtained by a 30° displacement of the reference line (O) to a line (B) obtained by a 180° displacement of the reference line (O) in a rotational direction of the drive shaft (1) in the inner circumferential sliding surface (14).

3. The swing compressor as claimed in Claim 1, wherein

the small-width portion (16) is provided on one side with respect to a plane (P) passing through a center of the blade (3) and parallel to the blade (3), the one side including a suction port (11) which is provided in the cylinder (6) and which communicates with the suction chamber (12).

4. The swing compressor as claimed in Claim 1, wherein

the piston (4) is placed so as to orbitally revolve along a horizontal plane, and

an upper edge of the small-width portion (16) is located lower than an upper edge of the large-width portion (15).

5. The swing compressor as claimed in Claim 1, wherein

the drive shaft (1) is so placed as to be inclined with respect to a horizontal plane, and

an upper edge of the small-width portion (16) is located lower than an upper edge of the large-width portion (15) with respect to a direction of the drive shaft (1).

6. The swing compressor as claimed in Claim 5, wherein

the drive shaft (1) is placed along a vertical direction.

7. The swing compressor as claimed in Claim 1, wherein

the piston (4) is formed of a sintered material.